



Blue Trail Software

Urgent Pain-Solving

Offering

Urgent Pain-Solving: Helping mid-sized tech and regulated companies under immediate operational stress meet deadlines, control costs, and scale infrastructure urgently.

Project Snapshot

Client: Compredict, an automotive AI company pioneering virtual sensor technology to advance the Software-Defined Vehicle (SDV) concept, reduce manufacturing costs, and enable predictive maintenance that scales after-sales business.

● **Industry:** Automotive AI / Data Visualization

● **Engagement Type:** High-pressure engineering intervention to deliver a mission-critical automotive demo in record time

● **Services Used:** Android Automotive app development, real-time CAN bus integration, data visualization pipelines, embedded hardware integration, both manual QA and automation, project management

The Challenge

Compredict needed to showcase its virtual sensor technology in a real-world demo car ("COMPREDICTOR") at a major industry event, only months away. The stakes were high:

● **Tight deadline:** A demo car had to be ready in just a couple of months for a major industry event to secure an important client opportunity.

● **High complexity:** Hundreds of signals, near-zero latency requirements, and custom automotive hardware.

● **Event-critical risk:** Without a solution, Compredict risked missing the event and losing a strategic sales opportunity.

BTS Solution

BTS rapidly assembled an 8-person specialist team and worked hand-in-hand with Compredict to design, build, and test the solution under extreme time pressure:

● **Custom Android Automotive Application:** Delivered both real-time driving mode (live CAN bus data) and playback mode (simulated video-linked data).

● **Low-Latency Data Pipeline:** Developed a custom CAN bus encoder/decoder and agnostic data ingestion system to support multiple inputs.

● **Hardware & OS Innovation:** Built a custom alternative head unit by researching, selecting, compiling, and customizing Android Automotive OS on third-party hardware.

● **Firefighting Wins:** Overcame issues at all stages, like communication latency, rendering smoothness, and hardware inconsistencies across geographies.

● **QA & Testing Tools:** Created custom playback tools, repeatable test frameworks, and even embedded simulators to ensure reliability before live demo.

● **Tight Collaboration:** Continually synced across continents (Latin American dev team, German car base) to test directly against the physical demo car.

Impact & Results

Despite intense pressure and a tight timeline, BTS delivered the visualization solution on the agreed dates.

 **Demo-ready success:** Compredict showcased the COMPREDICTOR demo car at the critical event as planned.

 **High performance:** Hundreds of signals rendered at expected UI refresh rates, with smooth real-time and playback visualization.

 **Scalable foundation:** BTS delivered documentation, architecture design guides, and knowledge transfer to ensure the tool could evolve with more signals and sensors.

 **Lasting asset:** What began as an urgent fix became a long-term showcase product, strengthening Compredict's sales and positioning.

 Despite shared stress under tight timelines, BTS and Compredict maintained focus on objectives, ensuring successful delivery.

Partnership Reflection

Even under extreme deadlines, BTS applied creativity, technical rigor, and teamwork to turn a near-impossible project into a success:

● **Resilience under pressure:** Overcame hardware, protocol, and software challenges with transparency and persistence.

● **Trust-driven collaboration:** Worked as one team with Compredict, aligning goals and adapting in real-time.

● **From crisis to opportunity:** Delivered not just a working demo, but a reusable, extensible platform that continues to benefit Compredict.

With BTS as a strategic partner, Compredict transformed a high-stakes deadline into a lasting competitive advantage.

